# Chapter 1

# Getting Ready

# Introduction

This Guide reflects the newest and most progressive features and options available on the Mackie Digital 8•Bus. The D8B is designed to grow with the audio industry. Each software revision provides new features and capabilities, updating your console and ensuring that your investment remains current for many years to come.

An increasing number of other manufacturers have jumped on the D8B band wagon. Through affiliations with companies like Apogee, TC Electronics, Massenburg, dbx, and Antares, Mackie Designs has provided an environment where third-party plug-ins let you design the perfect system for your needs—all within the Digital 8•Bus architecture!

## About This Manual

This manual is the "let's just do it" guide. Each chapter covers an important consideration:

- Chapter 1 describes basic setup procedures with an emphasis on achieving successful routing of an audio source to your monitors.
- Chapter 2 briefly describes all surface controls.
- Chapter 3 describes the on-screen interface.
- Chapter 4 highlights some typical applications.

If you'd like to move ahead at light-speed, try jumping directly to Chapter 4, using Chapters 2 and 3 as a reference. If you crave details, or if you're new to recording—especially digital recording—don't forget to check out our website for more info at www.mackie.com.

## Let's Get It Working

This is a step-by-step guide to get the Digital 8•Bus working. We assume you've pulled everything out of the box and are ready to start working.

First, you'll need:

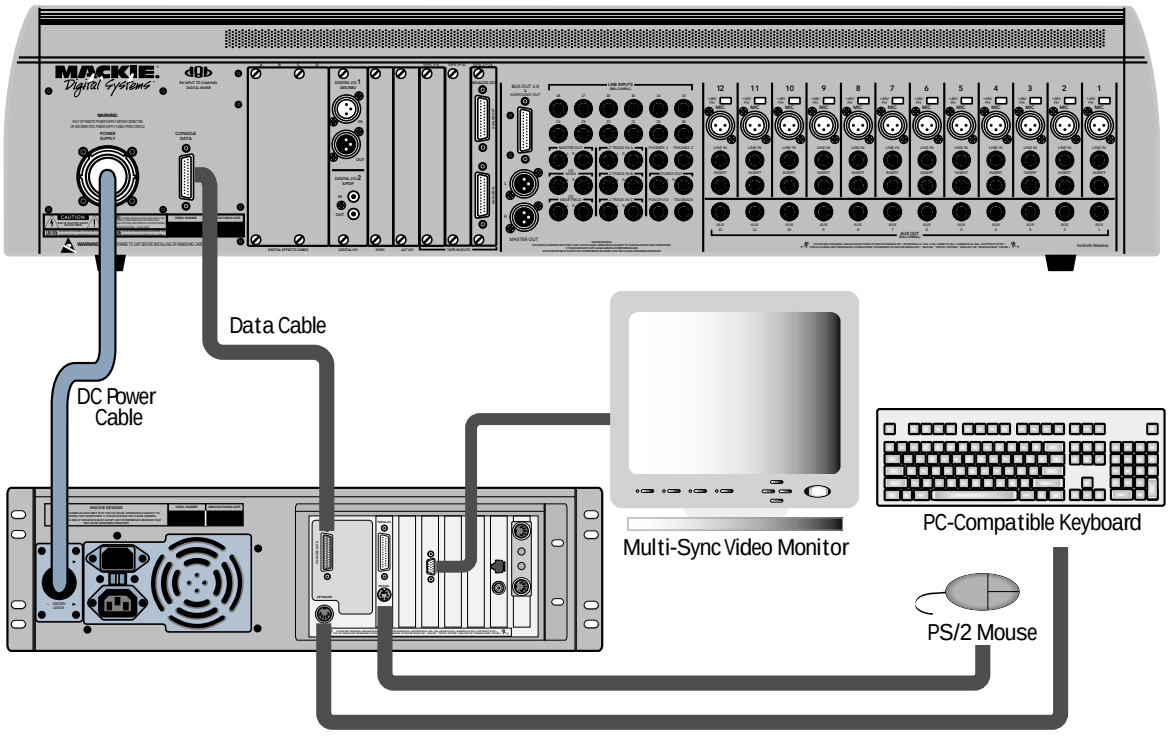
- 1 Stereo Power Amplifier
- 1 pair of Monitor Speakers (you can substitute a pair of powered monitors for the power amplifier/monitor speaker combo, or some stereo headphones)
- Miscellaneous cables
- 1 cup of coffee (we think any native Seattle-based beverage heightens the Mackie experience)

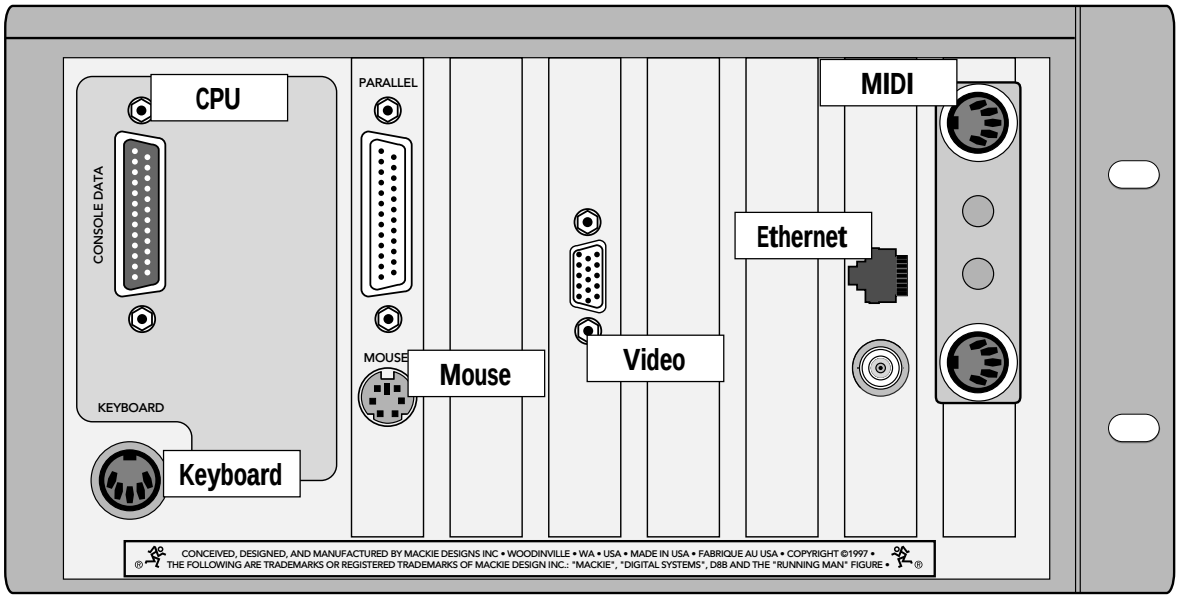
## Hooking Stuff Up

### First, connect the Remote CPU to the console.

1. Connect the DC power cable between the Remote CPU and the console. Rotate the outer sleeve of the connector clockwise until the sleeve is snug and finger-tight.

**Caution: The Remote CPU weighs 42 pounds, so we recommend that if you mount it in a rack, you place it at the bottom of the rack and provide additional support at the rear of the unit.**

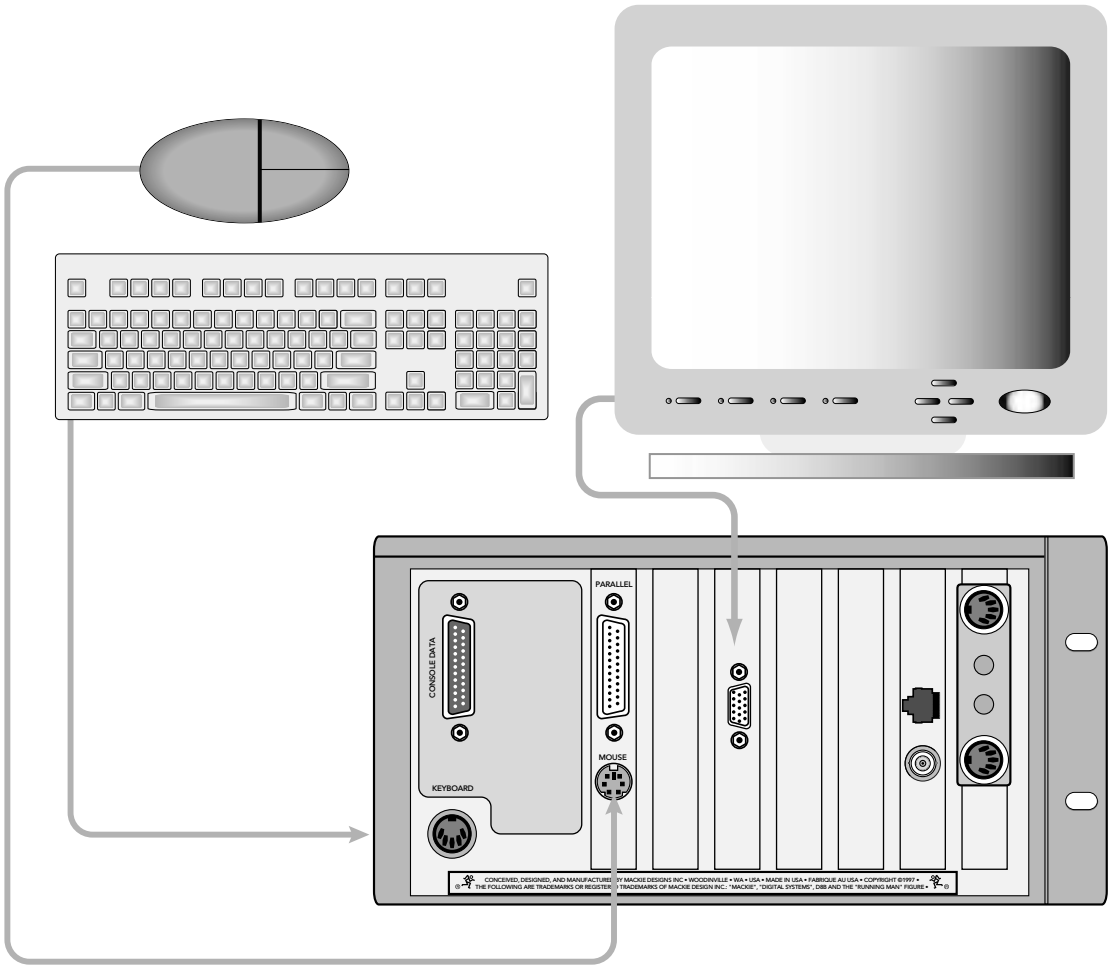



CPU
CONSOLE DATA
KEYBOARD
Keyboard
PARALLEL
MOUSE
Mouse
Video
Ethernet
MIDI
CONCEIVED, DESIGNED, AND MANUFACTURED BY MACKIE DESIGNS INC. • WOODINVILLE • WA • USA • MADE IN USA • FABRIQUE AU USA • COPYRIGHT ©1997 •
THE FOLLOWING ARE TRADEMARKS OR REGISTERED TRADEMARKS OF MACKIE DESIGN INC.: "MACKIE", "DIGITAL SYSTEMS", D8B AND THE "RUNNING MAN" FIGURE •

2. Connect the data cable between the Remote CPU and the console. Rotate the thumbscrews on each connector clockwise until they are finger tight.
3. Make sure the POWER switch on the Remote CPU is off.
4. Connect the detachable linecord to the Remote CPU. Shortly, we'll connect to AC power.

### Next, connect the keyboard, mouse, and video monitor.

These connections are optional, but we strongly recommend using them to get the most from your new Digital 8•Bus console.



1. Plug a PC-compatible keyboard into the KEYBOARD port on the back of the Remote CPU.
2. Plug a PS/2 compatible mouse into the MOUSE port on the back of the Remote CPU.
3. Plug an SVGA video monitor into the VIDEO port on the back of the Remote CPU.

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**Note**: We highly recommend the use of a multisync monitor; however, if one is unavailable you must use a monitor capable of at least a 72Hz scan rate. We recommend using a 17-inch or larger monitor for best results.

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### Now connect the audio inputs and outputs to the console.

1. Connect the CR NEAR FIELD or CR MAIN outputs on the back of the Digital 8•Bus to the line inputs of the power amplifier. These outputs are wired balanced when using a tip-ring-sleeve connector or unbalanced when using a tip-sleeve connector. Use instrument/line-level cable for this connection.

2. Connect monitor speakers to the output of the power amplifier using speaker cable. Always use high quality wire. The sound you hear will be more reliable and accurate.

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**Note**: If you're using powered monitors, connect the Left and Right CR NEAR FIELD outputs directly to the line inputs on the powered monitors.

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*Optional Refreshments*
Have a sip of java and a biscotti.

## Details

Make sure the POWER switch on the Remote CPU is off. Now plug the linecord into an AC outlet properly configured for your model. Leave the POWER switch off while connecting the peripheral equipment to the console.

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**Note**: The Remote CPU should be treated as you would any computer. We recommend that you use a UPS (Uninterruptible Power Supply) and a surge protector on the AC line.

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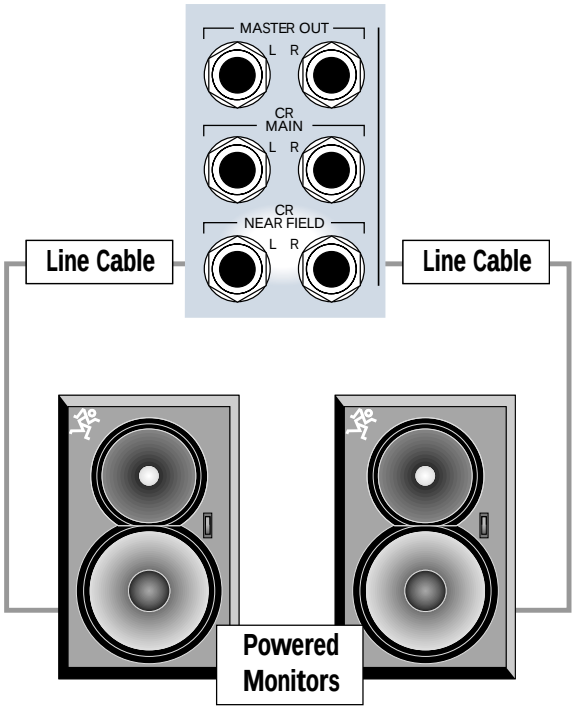
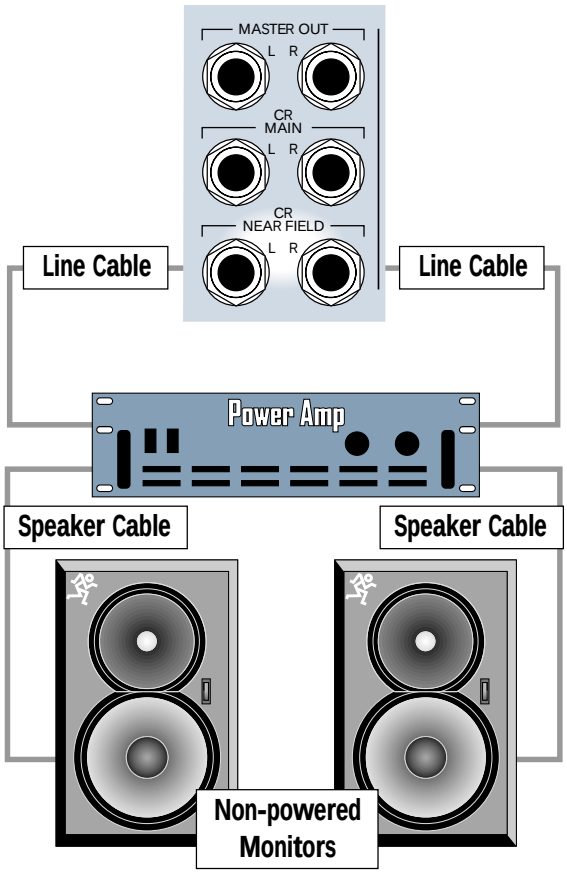
**Caution: Never connect or disconnect anything except microphone or line-level inputs while the console is powered up.**




***Connect directly from CR NEARFIELD or CR MAIN to powered reference monitors using line-level cable.***




***Connect from D8B outputs to power amp using line cable, then from amp to non-powered speakers using speaker cable.***

Turn on the power switch on the front panel of the Remote CPU, then turn on the power to all your peripheral equipment. The Digital 8•Bus takes a few moments to load the Mackie Real Time OS (Operating System) and initialize the DSPs. When the Vacuum Fluorescent Display (VFD) in the onboard Fat Channel Section indicates EQ settings for channel 1, the console is ready to use.

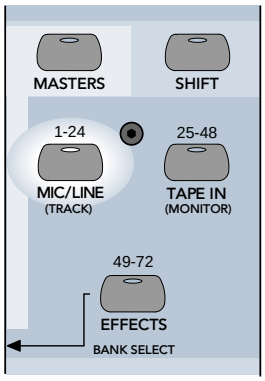
### Fast Track Power-Up

1. Switch D8B power on.
2. Verify that SPEAKER LEVEL V-Pot is turned all the way down.
3. Switch on all peripherals (processors, recorders, interfaces, etc.).
4. Switch on monitor amplifier or powered monitors.

## A New Way of Thinking: Four Consoles in One!

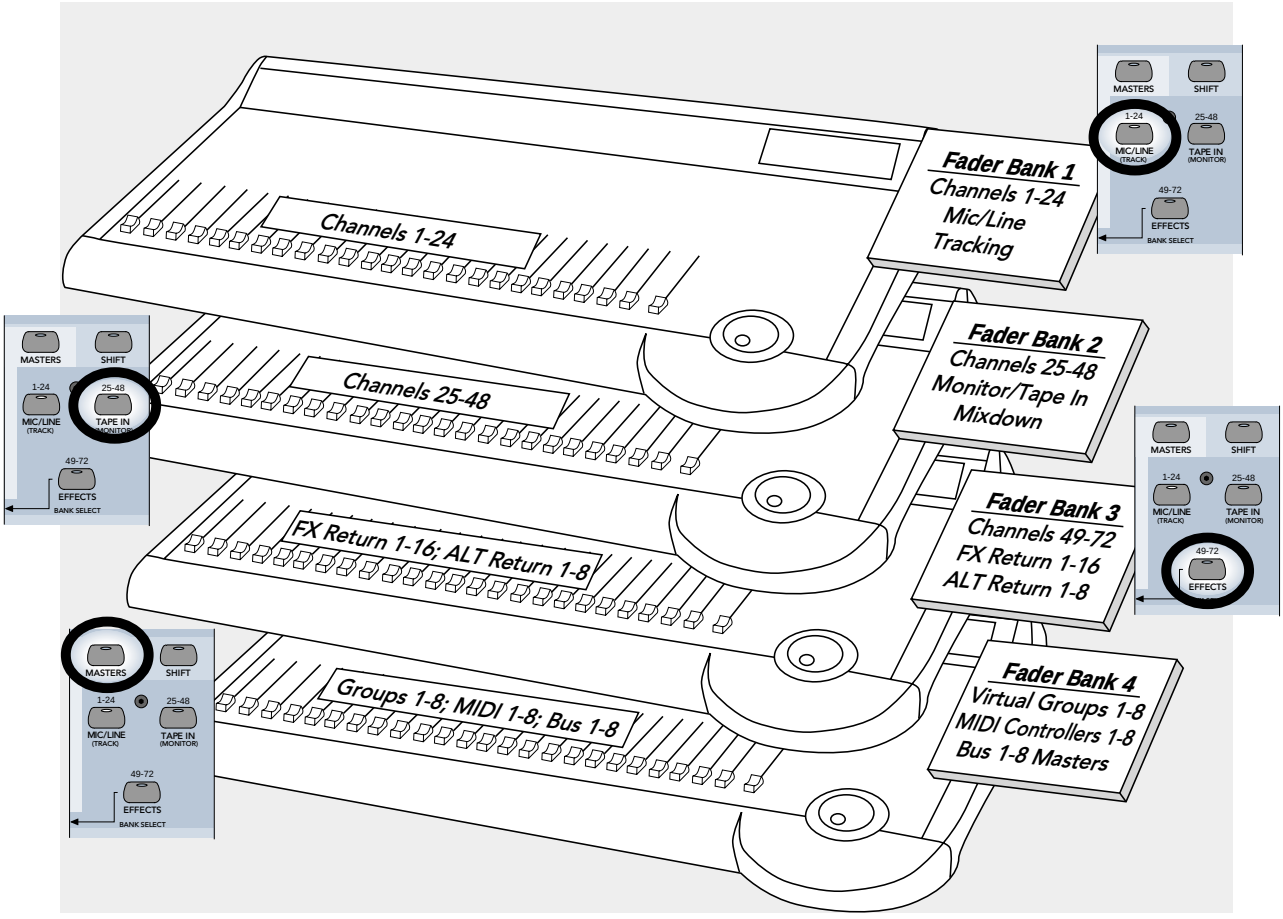
With the Digital 8•Bus, what you get is way more than what you see at first glance. Directly above the Master L/R fader, locate four buttons labeled MIC/LINE, TAPE IN, EFFECTS, and MASTERS.

These buttons let you access four completely different sets of controls, referred to as *Fader Banks*. Even though only one Fader Bank is accessible at a time, all four are fully functional at all times. Use of a computer monitor provides on-screen control of two fader banks at a time.




### Now that you've got the Digital 8•Bus powered up, try the different fader banks.

- Press the MIC/LINE button and set up a random set of fader levels.
- Press the TAPE IN button and set up a completely different set of fader levels.
- Do the same for EFFECTS and MASTER.



As you switch back and forth between all four fader banks, the faders will move to their respective settings for each bank. You'll find that this becomes your most popular demonstration. Your friends will love it; your spouse will love it; your pet will be mildly amused.

This exercise demonstrates a process that will become second nature as you increase your skills on the Digital 8•Bus. The layered approach to digital mixing is actually very convenient, while at the same time providing tons of features in a compact package. This mixer contains more flexibility and features than most consoles taking up 12 or more feet of desk space and costing up to 50 times more!

## Fader Bank Selection

- MIC/LINE button = Fader Bank 1 (Channels 1–24)
- TAPE IN button = Fader Bank 2 (Channels 25–48)
- EFFECTS button = Fader Bank 3 (Channels 49–72: Internal Effects Returns, FX 1–16, and ALT RETurns 1–8)
- MASTERS button = Fader Bank 4 (Virtual Groups 1–8, MIDI Controllers 1–8, Bus Masters 1–8)

This architecture provides a total of 56 inputs, with Fader Banks 1 and 2 providing 48 inputs, and the 8 ALT Returns in Fader Bank 3 providing another 8 inputs.

One of the primary applications the Digital 8•Bus was designed for is multitrack recording (generally up to 24 tracks). This involves tracking and monitoring, bouncing, overdubbing, and mixdown. You can think of Fader Bank 1 and Fader Bank 2 as two separate mixing consoles, where Fader Bank 1 is used for tracking and Fader Bank 2 is used for monitoring and mixdown.

Two 24-track machines can easily be connected to the D8B for mixdown: one into the Fader Bank 1 line inputs, and the other into the Fader Bank 2 (Tape) I/O cards. This setup provides an amazing amount of control through automation, routing, and DSP!

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**Note**: Although the D8B is perfectly set up for 24-track recording, it's possible to route channels to 46 outputs, all at the same time: 24 direct outputs (3 cards), 8 buses (Alt I/O), 2 main stereo outputs, and 12 auxes.

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## Let's Get Some Sound Happening

- Mixer Power On.
- Monitors connected and on.
- Microphone or Instrument plugged into Channel One.
- Phantom Power button pushed in if required.
- Fader Bank 1 (MIC/LINE selected).
- Press the MIC button down when using a microphone; leave it up for an instrument.
- While sound source is active, adjust TRIM for a reading around –15 on the channel 1 meter.
- Select L–R in the ASSIGNMENT section, then verify that the ASSIGN button on Channel One lights up green.
- In the CONTROL ROOM section, select MASTER L–R.
- Select the desired SPEAKERS in the CONTROL ROOM section.
- Set the SPEAKER LEVEL V-pot to about 11:00.
- Turn the MASTER L/R fader up to unity.
- Slowly raise the level of the Channel One fader until you hear sound.
- The Master L/R meters should display levels.
- Rejoice in the sense of accomplishment while listening to crystal-clear audio.

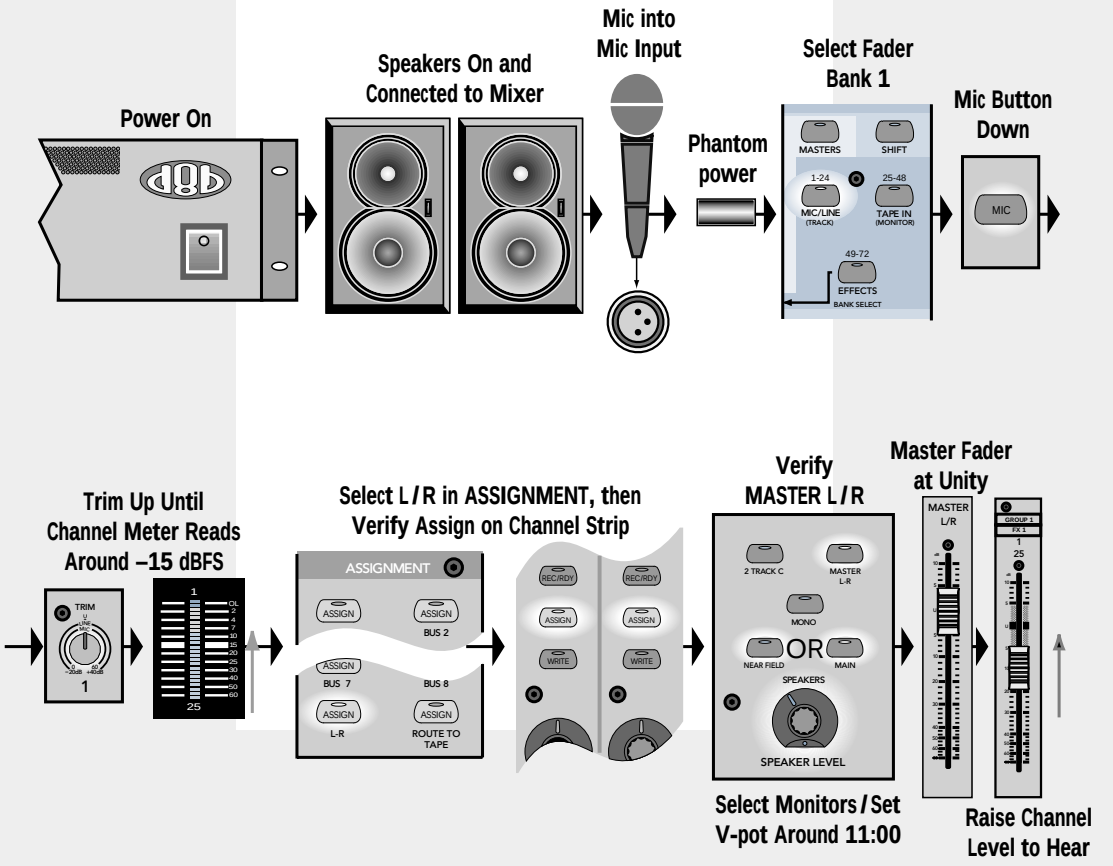
Refer to Figure 1-1 for the Fast Track Graphic description of this procedure.

### Details

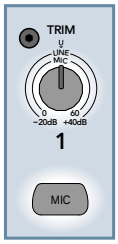
1. Especially for digital connections, it's important that the Digital 8•Bus is powered up first. This procedure helps establish the mixer as a primary source in the digital sync scheme.
2. Be sure you've noted which output is connected to the monitor system(s) and be sure they're powered up.
3. Be sure the microphone or instrument is plugged into Channel 1 and that Fader Bank 1 (MIC/LINE) is selected. It doesn't take long to get used to selecting the fader bank you really need to access; however, at first make a conscious effort to include this step in your routine.
4. Be sure the button below the gain trim labeled MIC is pressed down for a microphone or is in the up position for an instrument When working fast this button is sometimes overlooked. If it's in the wrong position there won't be any signal to play with. That's bad. Get in the habit of following the signal from the source to the destination—step by step. If you don't leave any steps out you'll be successful every time.

## Figure 1-1 Completing the Microphone Signal Path

Follow this graphic map to quickly complete a signal path using a microphone to capture the sound source..

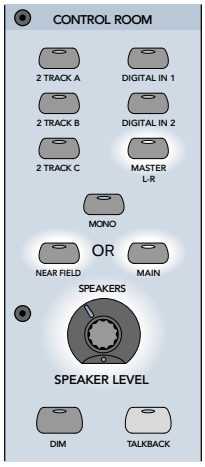



5. Start with gain TRIM down. While talking into the mic or playing the instrument, turn it up until the level stays around –15 to –10 on the channel one meter.

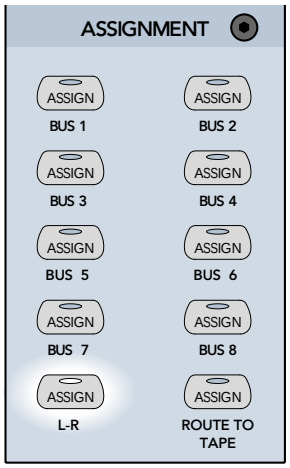



**Note**: The TRIM and MIC button status are two of the only controls that are not written into automation or snapshot data. That's a disadvantage of analog circuitry, but these controls are necessary. Running a strip of white safe-release tape across the top label strip allows for careful recording of each channel's TRIM level and MIC button status. This kind of tape can be removed and folded for storage with session documentation, guaranteeing accurate settings whenever you need to restore the mix.

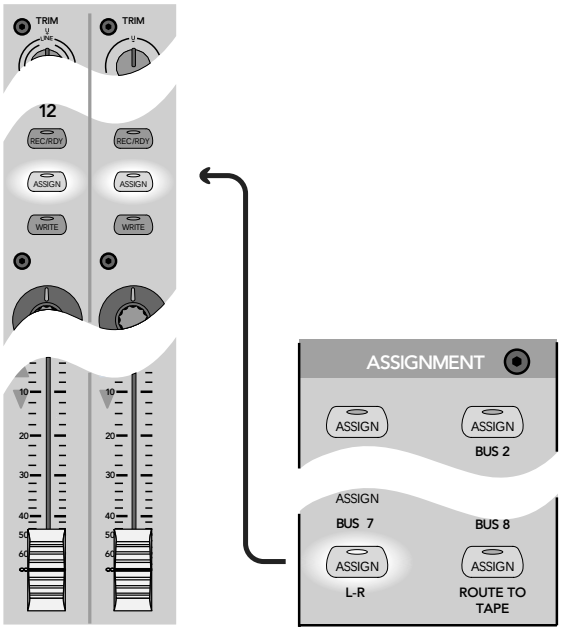
6. In the CONTROL ROOM section, press the MASTER L–R button so the yellow light comes on. Assigning this button sends whatever is coming from the MASTER L/R fader to the selected speakers.



7. In the ASSIGNMENT section, verify that when L–R is selected (green light on) the ASSIGN button in Channel One lights up green. This is basic bus assignment procedure. Anything you want to come out the MASTER L–R bus must light up on the assign button of each desired channel. In similar fashion, any channel that needs to be assigned to Bus 1 must have the channel assign button lit when Bus 1 is selected in the ASSIGNMENT section.




8. Be sure the SPEAKER button is lit that corresponds to your monitor system connection—that the yellow light shows on NEAR FIELD or MAIN.
9. Turn the SPEAKER LEVEL V-pot up to about 11:00.
10. Turn the MASTER L/R fader up to unity.
11. Slowly raise the level of the Channel One fader until you hear sound.




## Signal Routing Concept

The Digital 8•Bus, with its multilayer technology, literally performs the work of at least four consoles. To help organize the various connections, visualize each bank as a new console. The “V” or “Multi-V” diagrams that follow provide a simple and accurate mental image of the signal flow and/or processing while you put the Digital 8•Bus through its paces.

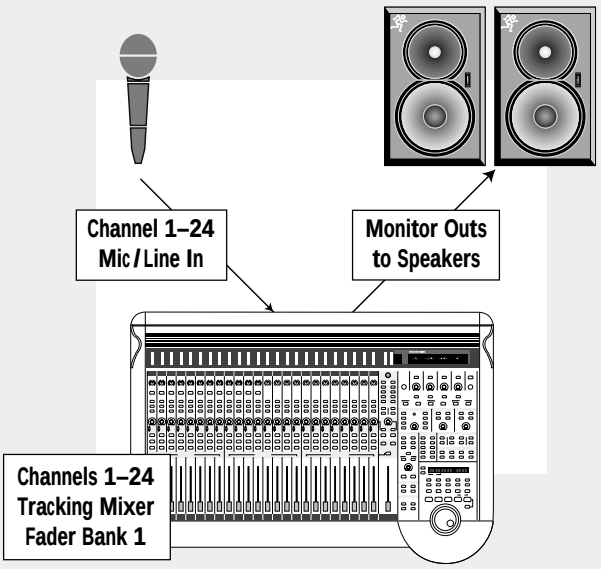
Figure 1-2 demonstrates a simple connection scheme utilizing a microphone that’s routed though the D8B to the monitor system.

Figure 1-3 demonstrates a tracking setup. Notice how the graphic representation of two separate fader banks supports the mental image of the D8B concept: sound source into the MIC/LINE bank, then routed to the multitrack, then back into the TAPE IN bank.

Figure 1-4 adds a mixdown recorder. The beauty of this concept lies in its flexibility. Start at the beginning, middle, or end of the signal path—it doesn’t matter. When the routing concept is understood, the process is simple.

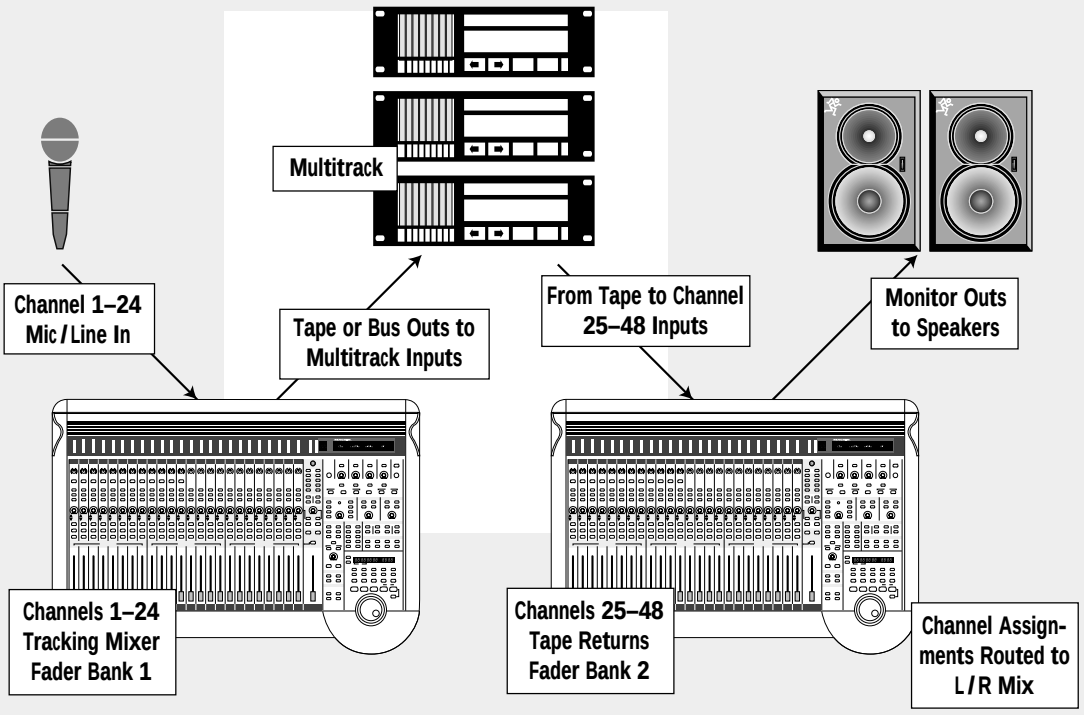
## Figure 1-2 Simple Microphone Connection/Basic Live Setup

This setup illustrates the most fundamental use of the D8B. A very basic live setting might require only this limited level of complexity.



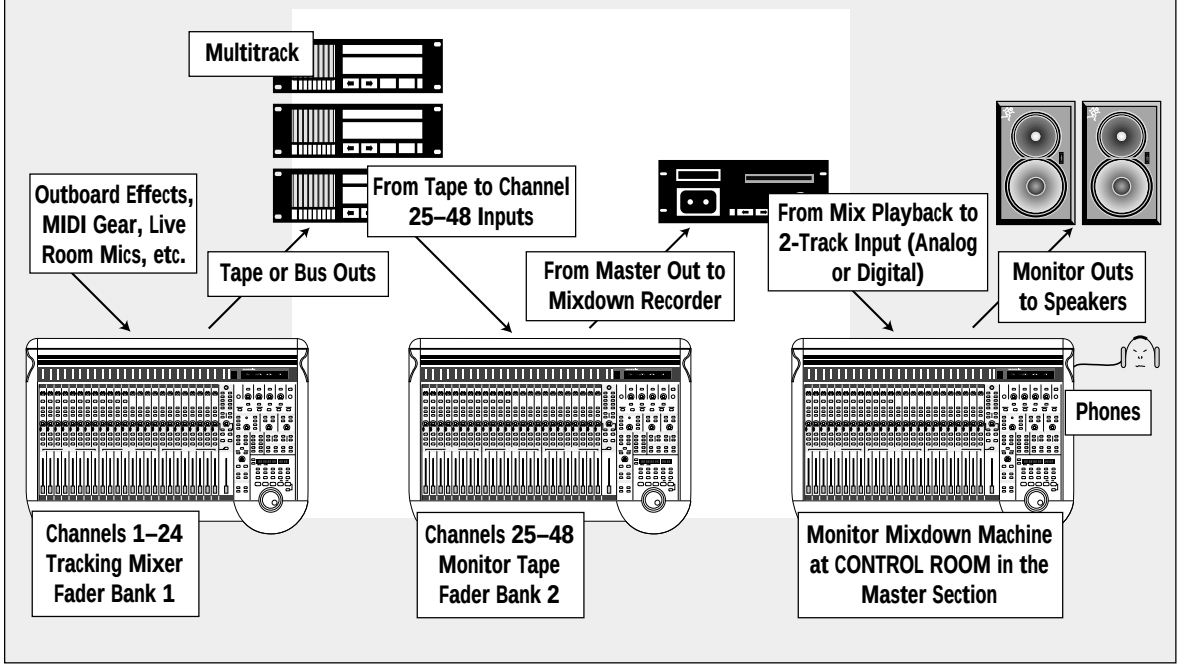

## Figure 1-3 Setting Up to Track

The graphic below highlights the simplicity of the D8B tracking procedure. Once levels to tape are set, using the Channel Trim controls, it's typically best to monitor the mix from the TAPE IN Fader Bank throughout tracking.



## Figure 1-4 Basic Mixdown Setup

This is a basic mixdown setup. Live Mic/Line input source might be used for any audio source: live vocals, instruments, or effects returns.


Multitrack
Outboard Effects, MIDI Gear, Live Room Mics, etc.
Tape or Bus Outs
From Tape to Channel 25–48 Inputs
From Master Out to Mixdown Recorder
From Mix Playback to 2-Track Input (Analog or Digital)
Monitor Outs to Speakers
Phones
Channels 1–24 Tracking Mixer Fader Bank 1
Channels 25–48 Monitor Tape Fader Bank 2
Monitor Mixdown Machine at CONTROL ROOM in the Master Section

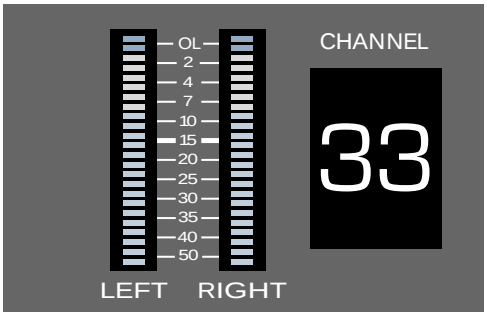
*Use this diagram for troubleshooting!*

## Signal Flow

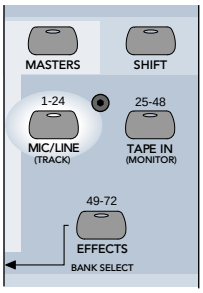
The previous diagrams help create an accurate mental image of how the D8B functions. The signal flow diagram in Figure 1-5 (on the next page) looks more closely at the actual path the signal takes from a point of origin to a chosen destination. This is a simplified flow-diagram designed to provide a "bird's-eye" view. Follow the signal from left to right. Notice the first thing the signal encounters, after the analog inputs (including the analog trim), is the analog-to-digital converter. The audio remains in the digital domain from that point until it finally converts back to analog at the main outputs, bus outputs, and external aux sends. Simply follow the arrows to discover the path—you never know where you might end up. For a more detailed block diagram of the D8B signal path refer to Figure 1-6.

## Keep Close Track of These Concepts

1. **The Channel Select Display**, next to the Master L/R meters, always displays the currently selected channel number no matter which Fader Bank is selected. If an adjustment is required in the Fat Channel, verify that the channel you intend to adjust is displayed here.

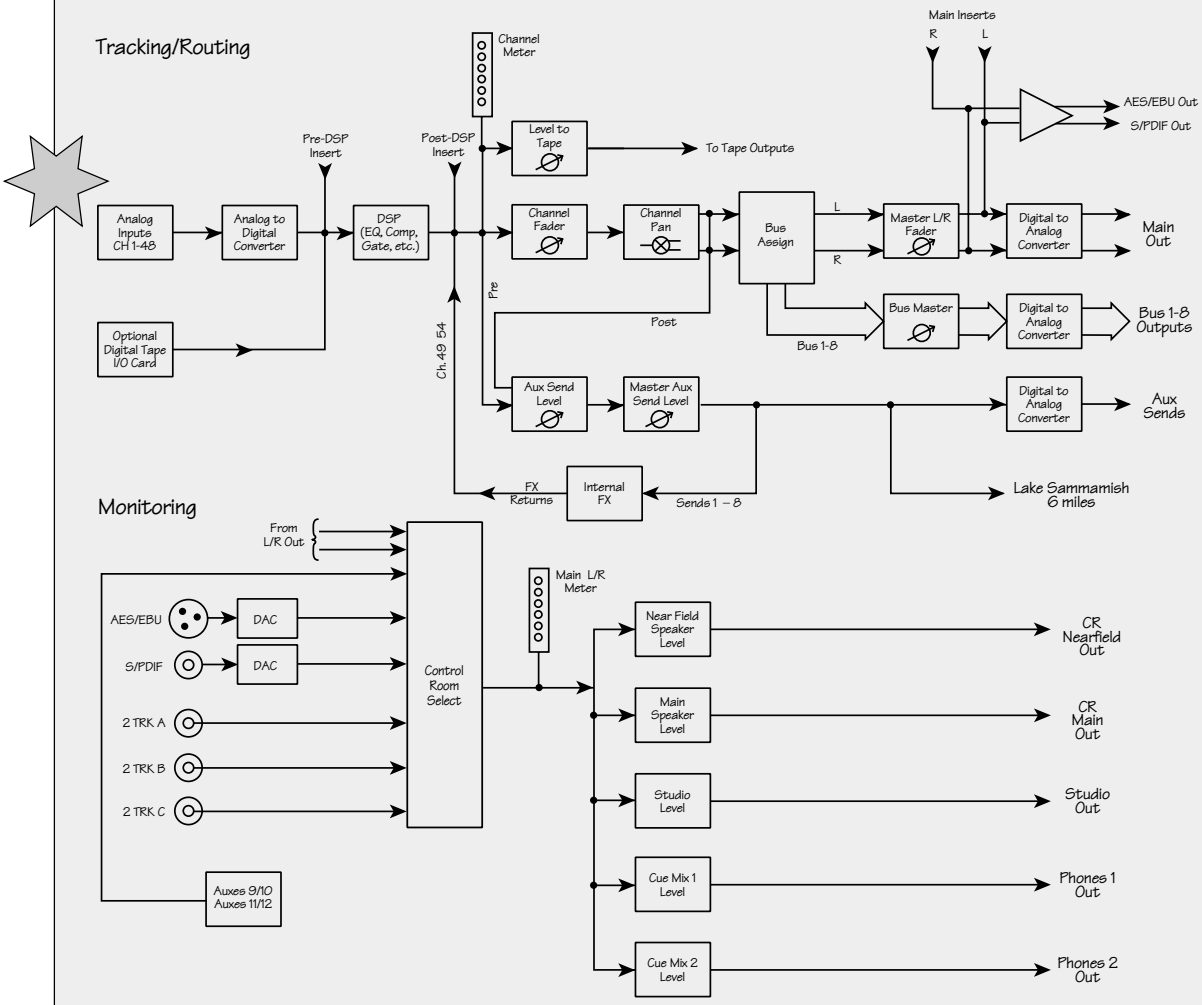



2. Be sure you verify the **Bank Selection** whenever you need to make a change. At first it's easy to forget to check the Fader Bank status. However, once you've adjusted to the layered consoles, maneuvering throughout the entire console will become second nature.

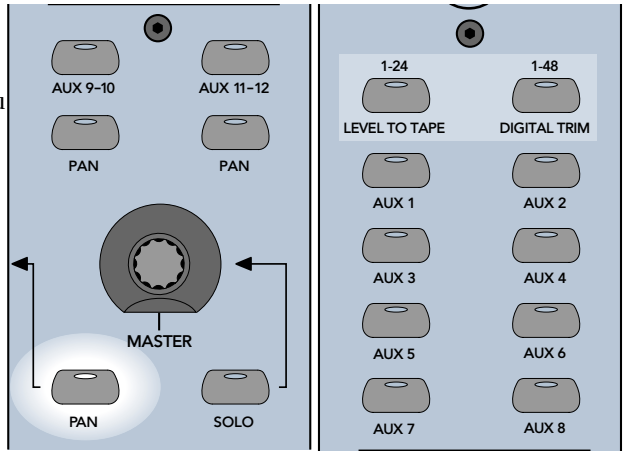


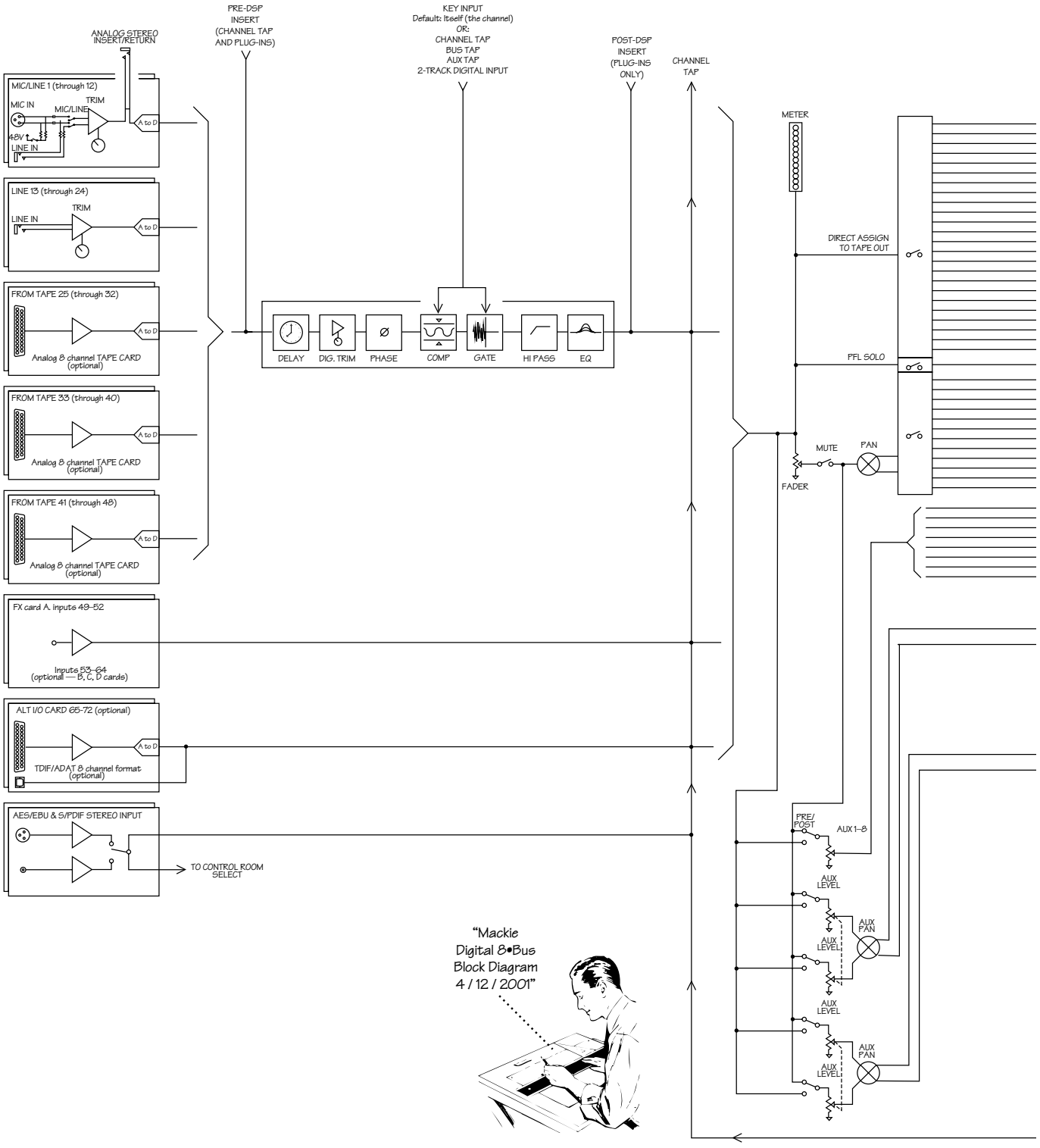
## Figure 1-5 Signal-Flow Diagram

Simply begin at the far left star and follow the route the signal must take to reach the master output. DSP includes all dynamics, equalization, and phase controls.



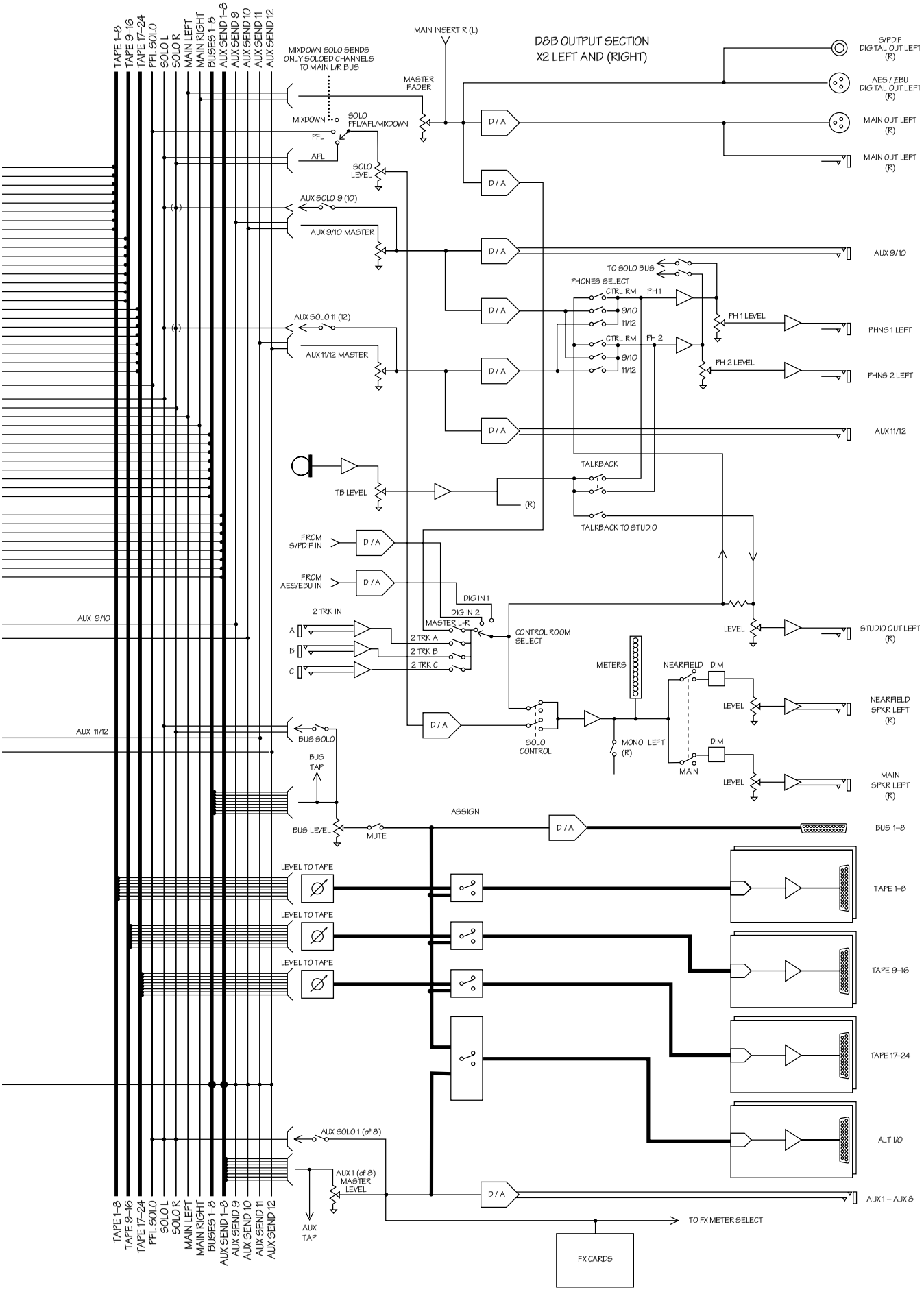

3. When using the V-Pot to adjust a parameter, make sure it's assigned to make the change you need. Since the **V-Pot is a multifunction control**, it's easy to assume it's doing the job you want when it might be changing a completely different setting. Intentionally check the status of the V-Pot before making a change.



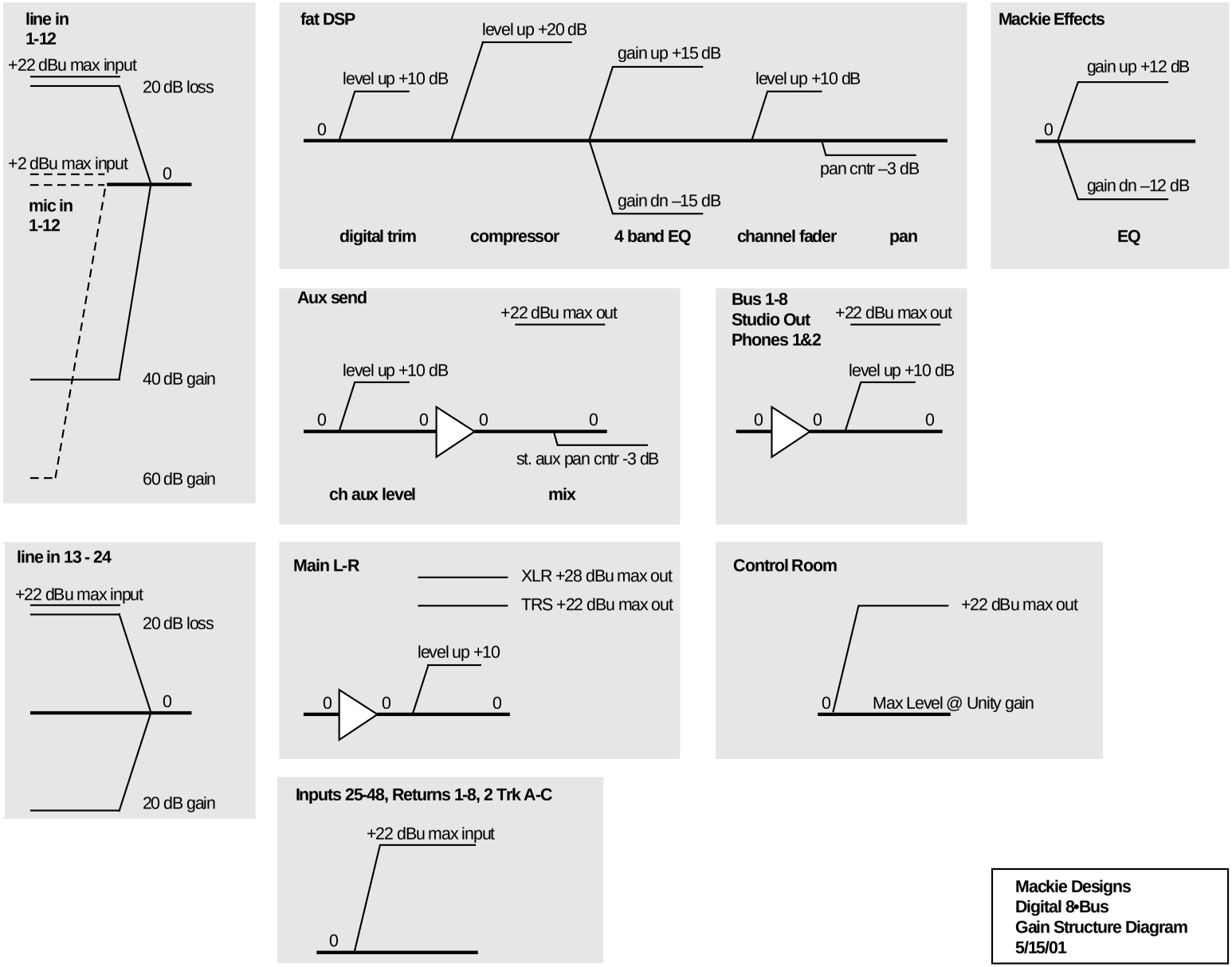



# Figure 1-6 D8B Block Diagram

This diagram provides a detailed view of the D8B signal path.


D8B OUTPUT SECTION
X2 LEFT AND (RIGHT)
TAPE 1–8
TAPE 9–16
TAPE 17–24
PFL SOLO
SOLO L
SOLO R
MAIN LEFT
MAIN RIGHT
BUSES 1–8
AUX SEND 1–8
AUX SEND 9
AUX SEND 10
AUX SEND 11
AUX SEND 12
MIXDOWN SOLO SENDS ONLY SOLOED CHANNELS TO MAIN L/R BUS
MAIN INSERT R (L)
MASTER FADER
MIXDOWN
SOLO PFL/AFL/MIXDOWN
PFL
AFL
SOLO LEVEL
AUX SOLO 9 (10)
AUX 9/10 MASTER
AUX SOLO 11 (12)
AUX 11/12 MASTER
D / A
S/PDIF DIGITAL OUT LEFT (R)
AES / EBU DIGITAL OUT LEFT (R)
MAIN OUT LEFT (R)
MAIN OUT LEFT (R)
AUX 9/10
TO SOLO BUS
PHONES SELECT
CTRL RM
PH1
9/10
11/12
PH 1 LEVEL
PHNS 1 LEFT
CTRL RM
PH 2
9/10
11/12
PH 2 LEVEL
PHNS 2 LEFT
AUX 11/12
TALKBACK
TB LEVEL
(R)
TALKBACK TO STUDIO
FROM S/PDIF IN
FROM AES/EBU IN
DIG IN 1
DIG IN 2
MASTER L-R
2 TRK IN
A
B
C
2 TRK A
2 TRK B
2 TRK C
CONTROL ROOM SELECT
LEVEL
STUDIO OUT LEFT (R)
METERS
NEARFIELD
DIM
LEVEL
NEARFIELD SPKR LEFT (R)
SOLO CONTROL
MONO (R)
LEFT
MAIN
DIM
LEVEL
MAIN SPKR LEFT (R)
AUX 9/10
AUX 11/12
BUS SOLO
BUS TAP
BUS LEVEL
MUTE
ASSIGN
BUS 1–8
LEVEL TO TAPE
LEVEL TO TAPE
LEVEL TO TAPE
TAPE 1–8
TAPE 9–16
TAPE 17–24
ALT I/O
AUX SOLO 1 (of 8)
AUX 1 (of 8) MASTER LEVEL
AUX TAP
AUX 1 – AUX 8
TO FX METER SELECT
FX CARDS

# Figure 1-7 D8B Gain Structure Diagram



# Specifications

## Meters:

- LED ladders displaying 24 channels, 24 LEDs per channel from –50 to 0 dBFS (0 dBFS = +20 dBu)

## Frequency Response:

- 20Hz-20kHz +/-0.5 dB

## Crosstalk (@ 1kHz)

- Adjacent channels: –90 dBu
- Aux sends feed through: –90 dBu
- Main outputs: –90 dBu

## Equalizer

- Gain Range: ±15 dB
- Frequency range: 20Hz-20kHz split into 4 bands
- Q: 1/12 to 3 octave

## Compressor

- Threshold: –60 to –1 dB
- Attack: 0.3 ms to 2.6 sec
- Release: 80 ms to 2.6 sec
- Ratio: 1:1 to 20:1
- Output: 0.0 dB to 20 dB

## Gate

- Threshold: –60 to –1 dB
- Attack: 0.1 ms to 0.6 sec
- Release: 80 ms to 2.6 sec
- Range: 0 dB to 100 dB

## Digital Specs

- Converters:
  24-bit, 115 dB Signal-to-Noise-Ratio (EIAJ),
  106 dB Dynamic Range, 128X oversampling
- DSP:
  32 bit (>190 dB dynamic range)
- CPU:
  300 MHz Celeron
  (166 MHz Pentium in earlier versions)

## File Storage:

- Floppy drive, internal hard drive or 10-base-T Ethernet network

## Dither:

- Apogee UV22 16-bit Super CD Encoding onboard

## Analog Input/Output Section

- Output Level (0 dBu = 0.775V RMS)
- Left and Right Outputs:
  +22 dBu balanced 1/4" TRS
  +28 dBu balanced XLR
- Bus (Tape) out:
  +22 dBu balanced 1/4" TRS
- Aux sends:
  +22 dBu balanced 1/4" TRS
- Inserts:
  +22 dBu unbalanced 1/4" TRS

## Channel Section (mic/line)

- Line input: balanced 1/4" TRS input
- Mic Input: balanced XLR input
- Preamp dynamic range:
  114 dB max.
- E.I.N.:
  –129.5 dBu, 150 ohm source
  –131.2 dBV, 150 ohm source
- CMRR: –83 dBu @1kHz
- Distortion: 0.005% @ 1kHz
  +14 dBu output level
  (20Hz-20kHz filter)
- Mic gain range: Unity to +60 dB
- Line In gain range: –20 dB to +40 dB (channels 1-12)
  –20 dB to +20 dB (channels 13-24)
- Input max. level: +4 dBu nominal
  +22 dBu clipping
- Aux send gain range: off to +10 dB
- Bus out gain range: off to +10 dB
- Threshold: –60 to –1 dB
- Ch. fader gain range: –100 to +10 dB

## Physical Dimensions

- Console:
  8.7" x 37.6" x 27.1" (221mm x 955mm x 688mm)
- Remote CPU:
  5.25" x 19.0" x 20.0" (133mm x 483mm x 508mm)

## Weight

- Console:
  73 lbs. (33.1kg)
- Remote CPU:
  50 lbs. (22.7kg)

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**Note:** All specifications subject to change without notice.

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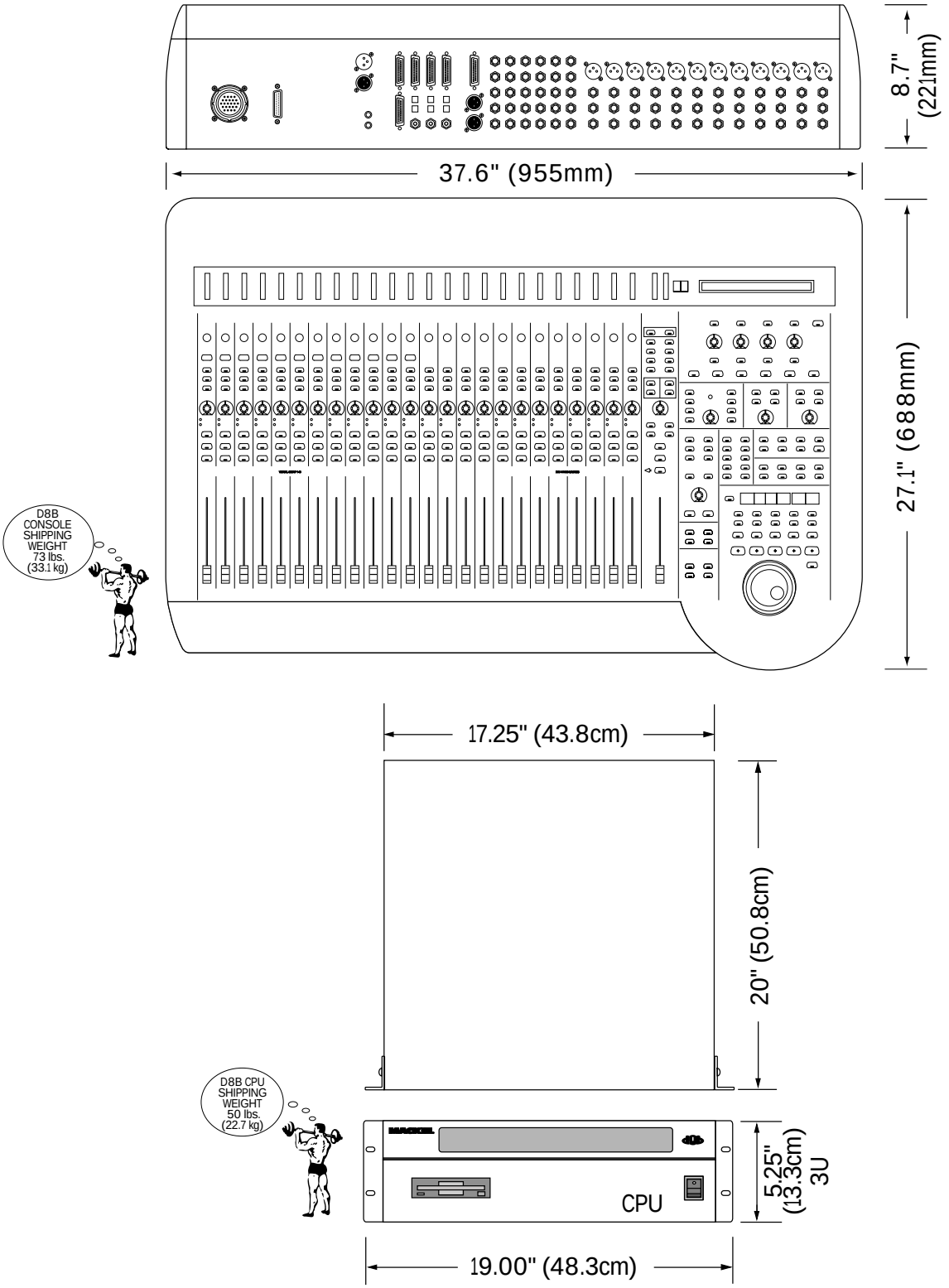
## Physical Dimensions



## Updating Software

Software upgrades can easily be downloaded from the Mackie website at www.mackie.com. Find the D8B section and select “Downloads.” *Always read the Release notes that accompany the software downloads*. They contain valuable information specific to the current software revisions and install procedures.

### Windows-based Computers

Follow these steps if you are downloading onto a Windows®-based computer:

1. Download the .ZIP files d8b3xxxx_PC.zip for the operating system installation, and the D8B Plug-in Demo Kit (Demo_Plugins_3xxx_PC.zip) for the plug-ins installation.
2. We recommend that you update the operating system first. Double-click on the d8b3xxxx_PC.zip file. This will launch the WinZip™ self-extraction utility.
3. The default "Unzip To" directory is set to C:\. If you prefer to have the files extracted to a different location, type the path into the provided text box and then press the Unzip button. Quit the WinZip™ self-extraction utility.
4. Locate the two extracted files, labeled d8b3xxxx Install 1.exe and d8b3xxxx Install 2.exe, on your hard drive.
5. Double-click on the first file, d8b3xxxx Install 1.exe, and you'll see a "WinImage™ Self Extractor" dialog box.
6. Ensure that the "Writing On Floppy" check box is selected, then click the "OK" button in the upper right corner of the dialog box.
7. When the "Batch Assistant" dialog box appears, insert a double-sided, high-density 1.44MB floppy disk into drive A:\ and then click the "OK" button.
8. When the Winimage™ utility has completed writing to the first disk, be sure to label your disks so you know which is #1 and which is #2. Additionally, be sure not to leave either disk in your floppy drive. Rebooting your PC with the disk in the drive can create problems with your PC. Repeat steps 5 through 7 for the second disk image file.
9. With the D8B console power supply turned off, insert installation disk #1 into the floppy disk drive.
10. Power on the console power supply.
11. Follow the instructions on the D8B control surface. (**Note:** The installer no longer uses the VGA screen; typical boot is about 30 seconds.)
12. Place the 2nd floppy disk in the drive when prompted by the installation software.
13. Remove the 2nd floppy disk when prompted and power down the console power supply, then power back on.
14. You now have the updated D8B operating system installed.
15. Make sure you read the release notes. They have important info about this upgrade.

**Note:** Repeat the above procedure with the Demo_Plugins_3xxx_PC.zip file to install the plug-in update. After updating the plug-ins software on the D8B, you *must* perform the “Erase UFX Memory” and “Upgrade UFX Cards” procedures (under Windows in the upper menu bar) to upgrade the UFX cards that are installed in the D8B (see page 86).

### Macintosh Computers

Follow these steps if you are downloading onto a Mac OS® computer:

1. Download the self-extracting file d8b3xxxx_Mac.sea for the operating system installation, and the D8B Plug-in Demo Kit (Demo_Plugins_3xxx_Mac.sea) for the plug-ins installation.
2. We recommend that you update the operating system first. Double-click on the Demo_Plugins_3xxxx_Mac.sea file to extract the two disk images.
3. Launch Apple's DiskCopy utility (you may need to download the DiskCopy utility from http://www.apple.com or check the system installations disks that came with your system).
4. Depending on your version of DiskCopy, either click the "Load Image File..." button or choose "Make a Floppy" from the Utilities menu.
5. Locate the image file labeled d8b3xxxx Install 1.img that was extracted onto your hard drive.
6. DiskCopy will prompt you (depending on your version of DiskCopy) to insert a floppy disk into the floppy disk drive. With older versions of Disk Copy, you may need to click the "Make a copy" button first.
7. Once the disk has been ejected from the computer, be sure to label your disk so you know which is #1 and which is #2. Then follow steps 4 through 6 to create the second installation disk from the second disk image file (d8b3xxxx Install 2.img).
8. With the D8B console power supply turned off, insert installation disk #1 into the floppy disk drive.
9. Power on the console power supply.
10. Follow the instructions on the D8B control surface. (**Note:** The installer no longer uses the VGA screen; typical boot is about 30 seconds.)
11. Place the 2nd floppy disk in the drive when prompted by the installation software.

12. Remove the 2nd floppy disk when prompted and power down the console power supply, then power back on.
13. You now have the updated D8B operating system installed.
14. Make sure you read the release notes. They have important info about this upgrade.

**Note:** Repeat the above procedure with the Demo_Plugins_3xxx_Mac.sea file to install the plug-in update. After updating the plug-ins software on the D8B, you *must* perform the “Erase UFX Memory” and “Upgrade UFX Cards” procedures (under Windows in the upper menu bar) to upgrade the UFX cards that are installed in the D8B.

**Note to Macintosh USB Floppy drive users:**

Apple's Disk Copy program will not work using the above method with a USB floppy drive because the menu option "Make a Floppy..." will not be available. You must use Aladdin Systems' ShrinkWrap program available for purchase and trial download from http://www.aladdinsys.com/shrinkwrap/index.html. Once you have ShrinkWrap installed, substitute these steps for steps 3-6 in the above directions.

3. Launch ShrinkWrap.
4. Select "Write Image back to Disk..." from the Image menu (command-B).
5. Locate the image file labeled d8b3xxxx Install 1.img that was extracted onto your hard drive.
6. ShrinkWrap will prompt you to insert a floppy disk into the floppy disk drive.

## Summary

This chapter has been specifically designed to help you understand the basic concept of the Digital 8•Bus architecture. The following two chapters describe the physical surface controls and the software features and capabilities. The last chapter describes specific applications as they pertain to unique recording tasks and needs.

Chapters 2 and 3 support what you’ll encounter in Chapter 4. Feel free to jump ahead, but keep in mind that you’ll probably need to use these second two chapters as a reference for the terms and controls that are new to you.